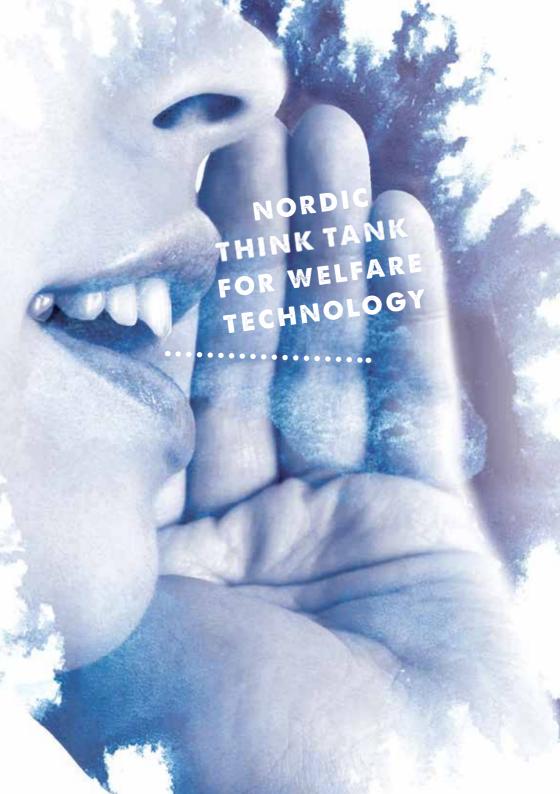# NORDIC THINK TANK

FOR WELFARE TECHNOLOGY

WELFARE TECHNOLOGY AND CHRONIC ILLNESSES, UNLEASHING THE HIDDEN POTENTIAL!

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The Nordic Think Tank for Welfare Technology is run by The Nordic Centre for Welfare and Social Issues, an institution under The Nordic Council of Ministers. In 2016, the think tank consisted of ten carefully selected experts, two from each of the five Nordic countries. The experts selected are chosen on the basis of their professional knowledge and experience, and are all among the leading experts in their respective countries. To maintain an independent think tank, no expert is employed by the central administration of their home countries. Furthermore, the two experts from each country are chosen so that both the public and private sectors are represented in the think tank.

The think tank selects and addresses one difficult question each year within the area of welfare technology. For 2016 the question was:

"Welfare technology and chronic illnesses, unleashing the hidden potential!"

During think tank meetings, the members identified some of the main challenges and barriers we meet when implementing welfare technology for citizens with chronic illnesses. These challenges and barriers were later transformed into the recommendations which can be found in this publication.

This year's theme was chosen due to its importance and political priority within the healthcare sectors of all five Nordic countries – and because there is a large potential to improve this area through better use of welfare technology.

Please note that the recommendations found in this document are set within a Nordic context. This means that some recommendations may be more applicable to some countries than others.

INTRODUCING THE PROBLEM

Welfare technology and chronic illnesses, unleashing the hidden potential!

Looking at the political agenda for health and welfare across the five Nordic countries reveals that patients with chronic illnesses and continued treatment of them is one of the main political priorities. This prioritisation is based on the potential economic burden that faces the Nordic countries should the number of patients with chronic illnesses keep rising. Diseases like diabetes, COPD and dementia have, along with other chronic illnesses, become prevalent diseases, and all prognoses indicate a continued increase in the coming years.

This is a common Nordic challenge in the sense that all five countries have similar issues today and face similar prognoses. We may have addressed the different chronic illnesses in a slightly different way, but our problems remain similar. Furthermore, addressing the use of welfare technology, none of the five countries have successfully implemented welfare technology on a nationwide scale to seriously address the issue.

This publication is focussed on how the Nordic countries can use welfare technology more successfully to better assist patients with chronic illnesses in their everyday life, as well as to alleviate the growing economic challenge described in the section above.

This is done by identifying the primary barriers and challenges prohibiting wider and better use of welfare technology – and presenting a wide range of political recommendations on how best to solve these obstacles.

WHAT ARE THE TOP CHALLENGES FOR SUCCESSFULLY USING WELFARE TECHNOLOGY FOR PATIENTS WITH CHRONIC ILLNESSES AND HOW DO WE ADDRESS THEM?

CHALLENGE 1:
Data management:

The question about how we manage healthcare data today on both the public and personal levels is already an important issue and will be even more so in the future.

On the public level, it very quickly becomes a question of silos and digital infrastructure. Although presently overcoming this is already a priority in all Nordic countries, we have to ask whether our current healthcare system is properly equipped to handle the amount of data collected? Furthermore, is the data collected in the primary healthcare sector transferable to our secondary healthcare sector; not to mention whether or not personal collected data is even usable in our current healthcare model? The Nordic countries should also be mindful of the limitations our current legislation is having on the collection and use of data, especially when the rules for providing assistive technology and medical devices to citizens can limit the possibilities for innovation.

On a personal level, we also see a barrier in the current ownership model – or lack thereof. The possibilities of collecting healthcare data has never been greater and it is done daily by most of us, but how much are we even aware of the data and do we even own our own data?

The Nordic Think Tank recommends:

Interoperability
We must be much better at ensuring interoperability throughout our national healthcare systems and across the Nordic region. We recommend a fundamental common Nordic requirement on device and data interoperability, based on existing relevant international standards (such as, for instance, Continua, Design guidelines, SCAIP, FHIR or others).

National strategies

National strategies on data management are commendable, but they must be more than 'just' strategies. They need to be deeply rooted and fully implemented nationally – for instance, within public procurement and legislation governing our social services.

User needs

Politicians and decision makers must be more conscientious on the actual need among chronically ill patients to share data – rather than creating obstacles in the name of personal data protection.

- Personal data protection and data usability need to be better balanced. The legislation governing this needs to be a framework which is to be respected, but also a framework which is flexible enough to be challenged by the emergence of new innovative technology, and thereby new opportunities for the chronically ill.

Ownership

Who owns our healthcare data today – and what role will both the public sector and private players such as Facebook, Snapchat and Google play in the future? To embrace this imminent future, we need to create a framework in which we give people the opportunity to own, control and access ALL their generated personal healthcare data.

Growing the marked

It is more than difficult to sell services and devices which operate across the sectoral divide in the Nordic countries. We need to look at new models for cooperation between the healthcare sectors that better allow for common public procurements, giving suppliers a growing market.

CHALLENGE 2:

Human adaptation of new workflows:

This barrier is a compilation of different problems prohibiting better use of welfare technology in relation to both chronic diseases and other target areas.

The public sector does have an adherent competence gap when it comes to implementing and offering new technology. This relates to change management and the ability to reorganise the structure of services, but also to service flexibility and a lack of proper training and education for the involved staff. The lack of change management and the inability to rethink the existing workflows makes implementation of new initiatives, including technology, a difficult and slow process.

Another aspect hindering the introduction of technology for persons with chronic illnesses is a failure within the public sector to take advantage of the growing possibilities of personalisation of both the technology and the services.

The Nordic Think Tank recommends:

Less project thinking
It is time for politicians and decision makers to stop referring to, and thinking about, welfare technology as an initiative, a project or a future target area. Welfare technology is simply a different way of delivering public service – not something extra on the side of an existing organisation – but a different way of doing the same thing as always: delivering high quality public service. Furthermore, we must also accept that the problems surrounding citizens with chronic illnesses are especially complex and can only be solved by better cooperation between healthcare professions and healthcare sectors.
- Therefore, it is necessary to map the current incentive structure between the different healthcare sectors and different healthcare professions. We need to ensure that our current structure is not serving as a hindrance to innovation. An all too common problem today is a lack of willingness to innovate/change, because the primary benefit of that given innovation/change applies to a different sector. The sector who pays for the innovation is not necessarily the sector that benefits.

Usabillity

Drop the idea of 'one size fits all'. We must respect that citizens with chronic illnesses are as varied and complex as society in general. We must focus on usability – but usability on different levels:

• Usability in the public sector organisation and service delivery.

• Usability in the implemented new technologies

• Citizen, organisation and technology must understand and respect each other!

Nordic best practice

A thorough collection of best practice cases collected across the Nordic region would be beneficial to serve as examples of what to do. Furthermore, increased Nordic collaboration on best practice could also lead to better sharing of competencies and experiences and perhaps even a programme of systematic exchange of key public employees.

CHALLENGE 3:
A lack of methods and practices for evaluating the societal benefits in implementing new welfare technology:

Though a common issue, its importance is slightly varied among the five countries. We need to forge a better understanding of the impact a new technology can have, financially, on the organisation, on staff, on the end user and on the general level of quality in the delivered service. There is a lack of common Nordic tools to do this both at a decentralised municipal level, but also to do an evaluation of what effects a potential implementation could have regionally, or even nationally.

The Nordic Think Tank recommends:

Map existing solutions
Do not look to develop new models or tools, but seek to identify and map the existing ones from each of the Nordic countries. The current Nordic project CONNECT is currently attempting to do exactly this, and their findings and recommendations will be available from January 2017.

Next practice
Existing best practice is used as the basis for developing next practice. Use the findings from the recommendation above in a structured way to create a Nordic 'master class' for Nordic experts, in which exciting best practices are discussed and developed into next practice

Structured need for data
We need to be more structured in our demand for data. Our technology needs to be smarter and collect better and more usable data – continuously – data we can use to better evaluate that same technology. To do this, the public sector, as the demand side, needs to be better at structuring its needs for data when they procure new technology. The key is to ensure data collection is continuous while the technology is in use – and this is not only for sensor or electronic technology but also (and perhaps especially) for assistive devices.

WHAT ARE THE TOP BARRIERS FOR SUCCESSFULLY USING WELFARE TECHNOLOGY FOR PATIENTS WITH CHRONIC ILLNESSES AND HOW DO WE ADDRESS THEM?

BARRIER 1
Common standards:

This challenge refers to Nordic diversity. Although our societies are built on the same Nordic welfare model, sharing similar healthcare systems and a foundation of high quality public services, it is important to stress that we are still five separate countries. As five separate countries, we have tackled the various healthcare and public innovation challenges slightly differently over the years.

This means that as a Nordic region we lack common standards within welfare technology. This is not limited to technological and digital standards; this also encompasses common working standards for service delivery and common legal standards for awarding/assigning health and assistive technology to citizens.

The lack of common Nordic standards makes cross country cooperation more difficult, and it makes the common Nordic market weaker. A weaker market affects the patients and their ability to get the best devices and the best services.

The Nordic Think Tank recommends:

Stronger nordic cooperation
All the Nordic countries are working on improving the standards for welfare technology. We are currently quite good at cooperating when it comes to international standards for assistive technology, but less so when it comes to digital standards as well as service and legal standards. Over the last couple of years, the Nordic countries have looked at Continua as a digital framework – but closer cooperation is needed.

The Nordic Think Tank for Welfare Technology sees this as a problem best solved through the Nordic cooperation and calls for the five individual countries to support a project within the framework of the Nordic Council of Ministers. This project

should, involving stakeholders from different public levels, map the main needs and barriers within standardisation on a common Nordic level, and recommend which areas should be prioritised for closer cooperation. Given the complexity of this task, it is recommended to start on a general level and zoom in on specific professional issues within product standards, digital standards, service standards or legal standards.

BARRIER 2
A stronger focus on prevention across age groups with the use of intelligent data is needed:

The Nordic Think Tank believes that there is a tendency among the Nordic countries to have a 'reaction'-based treatment and monitoring plan for patients with chronic illnesses. Currently, we are not very good at using the vast amounts of collected healthcare data among citizens in an intelligent manner to better predict and prevent illnesses.

The Nordic Think Tank recommends:

Better collection and monitoring
The think tank would like the Nordic countries to be better at collecting and monitoring healthcare data (also across the Nordic borders) in order to better monitor which daily healthcare activities should be prioritised. This could be especially relevant for patients with comorbidity, which may fall under different healthcare sectors. The collection and monitoring of data should include multiple sources – including privately collected data.

• For this to happen, we must be better at solving the barrier of standards mentioned previously in this publication. Cooperation on monitoring and collecting healthcare data would require common standards for structured data management, as well as standards for dataflow between sectors – not only within the public sector, but also with the patient and perhaps even with private entities (i.e., technology suppliers, advisors or insurance companies).

BARRIER 3
A stronger end user focus:

We, in the Nordic countries, need to be better at including the patients with chronic illnesses in the management of their own diseases. Too many people feel trapped or 'managed' in our healthcare system, and many even see the public healthcare system as an opponent, when they try to introduce new innovations to improve their quality of life.

The Nordic Think Tank recommends:

Decentralised freedom
The think tank recommends giving the municipalities more freedom. It is not beneficial to nationally micromanage either the exact content of the services or how they are best delivered – this limits both innovation and quality.

User contribution
We also recommend introducing the opportunity to invite patients to contribute to the public case management of their illnesses. Involving the patient more would also open up opportunities for municipalities or hospitals to better act on patients' collected data – and make it easier to adjust or design services for each individual patient.

MEMBERS OF THE NORDIC THINK TANK FOR WELFARE TECHNOLOGY

Une Tangen (Norway)
Works for KS Research, Innovation and Digitilization. She has followed the work being done within welfare technology for many years and has been responsible for the development of tools and services within KS designed to help the Norwegian municpalities become better at implementing new technology.

Lars Lundberg (Sweden)
Expert on welfare technology and business policy at Almega. He replaced Mikael von Otter in the Think Tank during the second half of 2015 – as he replaced him at Almega. Lars also has a municipal background having worked with welfare technology in Stockholm City.

Sigrun Johansdóttir (Iceland)
Manager of TMF. Sigrun manages TMF, which translated into Technology Media Skills. She has more than 20 years of experience working with technology for people with different needs.

Ivan K Lauridsen (Denmark)
Head of department for Welfare Technology Aarhus Municipality. Ivan leads the department for welfare technology at one of the leading Danish municipalities within the area of welfare technology.

Claus B Nielsen (Denmark)
Business Development Manager at Delta. Claus is one of the leading characters within ICT and Welfare Technology in Denmark, and has contributed to both national and international projects within the area. Claus is also the Vice Chairman of the European working group for Continua Health Alliance.

MEMBERS OF THE NORDIC THINK TANK FOR WELFARE TECHNOLOGY

Randi E Reinertsen (Norway)
Research Director and Professor at SINTEF. Welfare technology is a strategic initiative at SINTEF and they are involved in several large national projects within the area.

Eva Sahlén (Sweden)
Director of Social Affairs at Västerås Municipality. Eva has spearheaded the success obtained by Västerås Municipality within the area of welfare technology. Västerås is today recognized as the leading municipality in Sweden within this area.

Hákon Sigurhansson (Iceland)
Managing Director TM SOFTWARE. TM Software is one of the leading companies in software solutions for the healthcare and welfare sector in Iceland. Hákon has been has over 20 years of management experience in the software and health care IT industries.

Lea Stenberg (Finland)
Project Manager at Union for Senior Services. Lea is project manager on a large project within welfare technology called The KÄKÄTE project. The project aimed to increase the chances of independent living.

Dennis C Søndergård (Denmark)
Senior Advisor at the Nordic Center for Welfare and Social Issues. Dennis is responsible for the area of Welfare technology at The Nordic Center for Welfare and Social Issues. He is also responsible for the Nordic Thinktank for Welfare Technology and chairs the sessions.

NORDIC THINK TANK FOR
WELFARE TECHNOLOGY

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